

such that the minimum viscosity of said prepreg resin during curing thereof is between 150-1500 poise.

a8 2. (Amended) A self-adhesive prepreg according to claim 1 wherein said thermosetting resin is selected from the group consisting of epoxy, bismaleimide and cyanate ester resins.

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3. A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified and micronized thermoplastic particles which have a glass transition temperature that is above 200°C.

4. A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified polyether sulfone, micronized polyether sulfone and densified polyetherimide.

5. A self-adhesive prepreg according to claim 3 wherein said thermoplastic fillet forming particles have particle sizes ranging from 1 to 100 microns.

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a9 6. (Amended) A self-adhesive prepreg according to claim 1 wherein said prepreg resin comprises an epoxy thermosetting resin, a micronized polyethersulfone viscosity control agent and densified polyether sulfone fillet forming particles.

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7. A self-adhesive prepreg according to claim 1 wherein the minimum viscosity of said prepreg resin over the curing temperature range of said prepreg resin is between 150 to 1500 poise.

8. A self-adhesive prepreg according to claim 1 wherein the minimum viscosity of said prepreg resin over the curing temperature range of said prepreg resin is between 300 to 1200 poise.

9. A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are located substantially at said bonding surface of said prepreg.

*a10* 10. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 1 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

11. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 2 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

12. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 3 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

13. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 4 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

14. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 5 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

15. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 6 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

16. (Amended) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 8 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

17. (Amended) A method for adhesively bonding a prepreg face sheet to a honeycomb comprising the steps of:

forming a self-adhesive prepreg comprising providing at least one fiber layer and a prepreg resin wherein said prepreg resin is combined with said fiber layer to form said self-adhesive prepreg comprising a bonding surface which is adapted to be bonded directly to said honeycomb, said prepreg resin comprising a thermosetting resin, a curing agent, a thermoplastic viscosity control agent selected from the group consisting of polyetherimides and micronized polyether sulfone, said thermoplastic viscosity control agent being substantially dissolved in said thermosetting resin and thermoplastic fillet forming particles which are not dissolved to a substantial degree in said prepreg resin;

bonding said self-adhesive prepreg to said honeycomb wherein said bonding comprises curing said self-adhesive prepreg for a sufficient time and at a sufficient temperature to substantially dissolve said fillet forming particles and wherein the amounts of said resin dissolved thermoplastic viscosity control agent and said thermoplastic fillet forming particles are such that the minimum viscosity of said prepreg resin during curing thereof is between 150-1500 poise.

18. (Amended) A method according to claim 17 wherein said thermosetting resin is selected from the group consisting of epoxy, bismaleimide and cyanate ester resins.

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19. A method according to claim 17 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified and micronized thermoplastic particles which have a glass transition temperature that is above 200°C.

20. A method according to claim 17 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified polyether sulfone, micronized polyether sulfone and densified polyetherimide.

21. A method according to claim 18 wherein said thermoplastic fillet forming particles have particle sizes ranging from 1 to 100 microns.

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22. (Amended) A method according to claim 17 wherein said prepreg resin comprises an epoxy thermosetting resin, a micronized polyethersulfone viscosity control agent and densified polyether sulfone fillet forming particles.

23. (Amended) A cured honeycomb sandwich panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 1 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin and wherein said honeycomb exhibits a core crush of less than 5%.

24. (Amended) A cured honeycomb sandwich panel according to claim 23 wherein said fabric layer comprises three thousand filament, six thousand filament or twelve thousand filament carbon fabric.

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25. A cured honeycomb sandwich panel according to claim 24 wherein said fabric layer comprises 6K or 12 K carbon fabric and said honeycomb exhibits a core crush which is essentially 0%.

Please add the following new claims:

a<sup>12</sup> --26. A self-adhesive prepreg according to claim 1 wherein said thermosetting resin is selected from the group consisting of difunctional, trifunctional and tetrafunctional epoxies.

27. A self-adhesive prepreg according to claim 1 wherein said curing agent is selected from the group consisting of dicyandiamide, 3,3'-diaminodiphenylsulfone, amino or glycidyl-silanes, CuAcAc/Nonylphenol, 4,4'-diaminodiphenylsulfone, 4,4'-methylenebis(2-isopropyl-6-methylaniline), and 4,4'-methylenebis(2,6-diisopropylaniline).

28. A self-adhesive prepreg according to claim 27 wherein said curing agent is dicyandiamide, 3,3'-diaminodiphenylsulfone or combinations thereof.

29. A self-adhesive prepreg according to claim 26 wherein said resin comprises:

- 10 to 40 parts by weight of a trifunctional epoxy resin;
- 10 to 40 parts by weight of a difunctional epoxy resin;
- 11 to 25 parts by weight of an aromatic curing agent;
- 0 to 3 parts by weight of a non-aromatic curing agent;
- 5 to 15 parts by weight of said thermoplastic viscosity control agent; and
- 8 to 30 parts by weight of said thermoplastic fillet forming particles.

30. A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 9 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

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31. A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 26 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

32. A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 27 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

33. A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 28 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

34. A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 29 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

35. A method according to claim 17 wherein said thermosetting resin is selected from the group consisting of difunctional, trifunctional and tetrafunctional epoxies.

al<sup>2</sup> 36. A method according to claim 17 wherein said curing agent is selected from the group consisting of dicyandiamide, 3,3-diaminodiphenylsulfone, amino or glycidyl-silanes, CuAcAc/Nonylphenol, 4,4'-diaminodiphenylsulfone, 4,4'-methylenebis(2-isopropyl-6-methylaniline), and 4,4'-methylenebis(2,6-diisopropylaniline).

37. A method according to claim 36 wherein said curing agent is dicyandiamide, 3,3'-diaminodiphenylsulfone or combinations thereof.

38. A method according to claim 35 wherein said prepreg resin comprises:  
10 to 40 parts by weight of a trifunctional epoxy resin;  
10 to 40 parts by weight of a difunctional epoxy resin;  
11 to 25 parts by weight of an aromatic curing agent;  
0 to 3 parts by weight of a non-aromatic curing agent;  
5 to 15 parts by weight of said thermoplastic viscosity control agent; and  
8 to 30 parts by weight of said thermoplastic fillet forming particles. --

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